



MINE IMPACT BURIAL PREDICTION

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Outline

- May 2002 experiments off Corpus Christi
- Reduction of cylinder drop data
- Some results from Cocodrie-Corpus Christi cylinder drop data sets
- Request for recommendations for June and August 2003 experiments



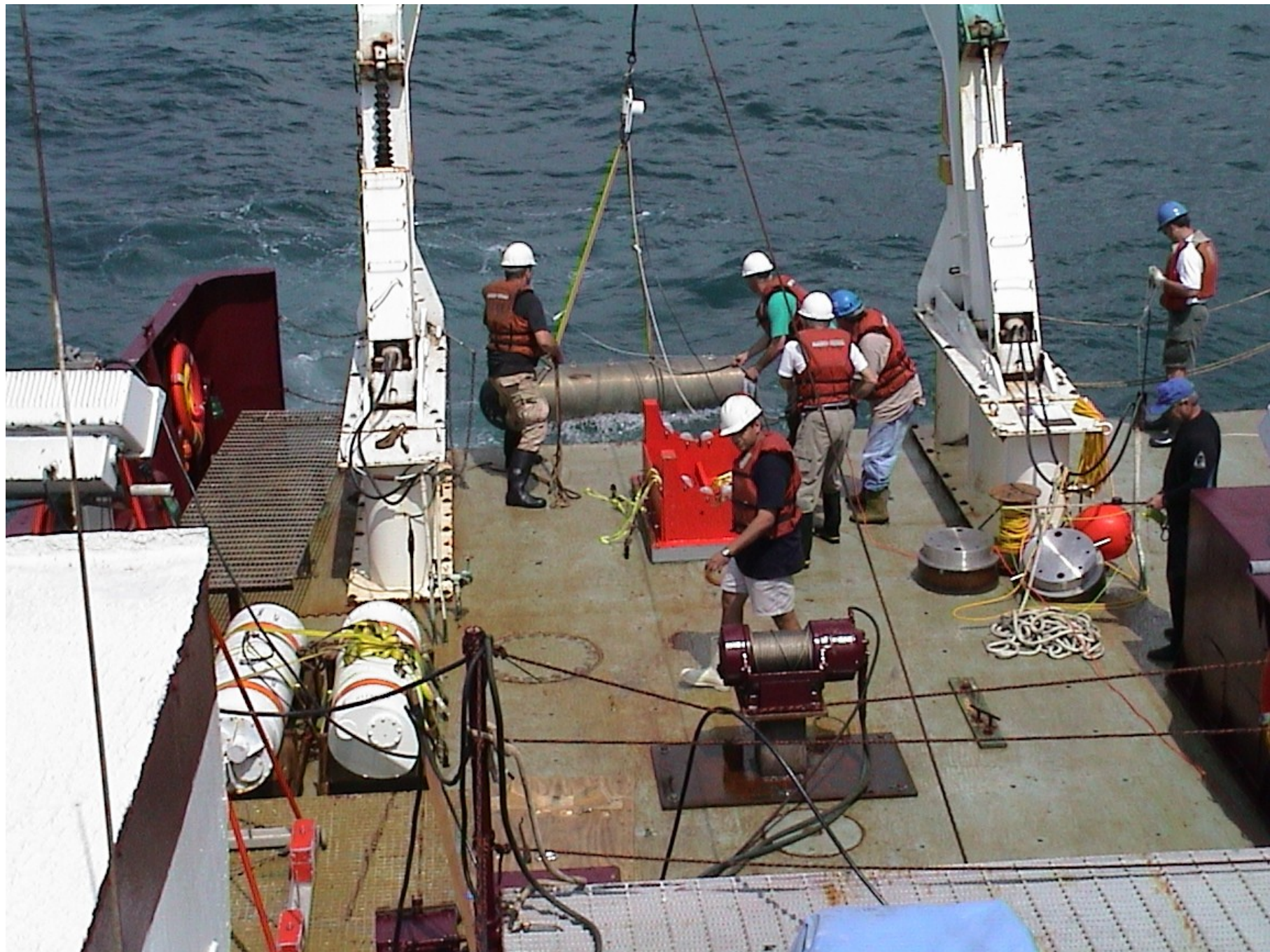
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May 2002 experiments off Corpus Christi

- Stations occupied - 20
- Acoustic impedances, 8-30 & 12 kHz, at and between all stations
- Cylinder drops - 11, internal data lost on 1 = 10 drops with all data
- Inert mine deployments - 2, 1 inert lost after all data obtained
- Sediment cores obtained - 13
- STATPEN deployments - 5, total soundings 11
- PROBOS drops - 6, total soundings 16
- STING drops - 20, both 25 & 35 mm diameter foot
- XBP drops - 31

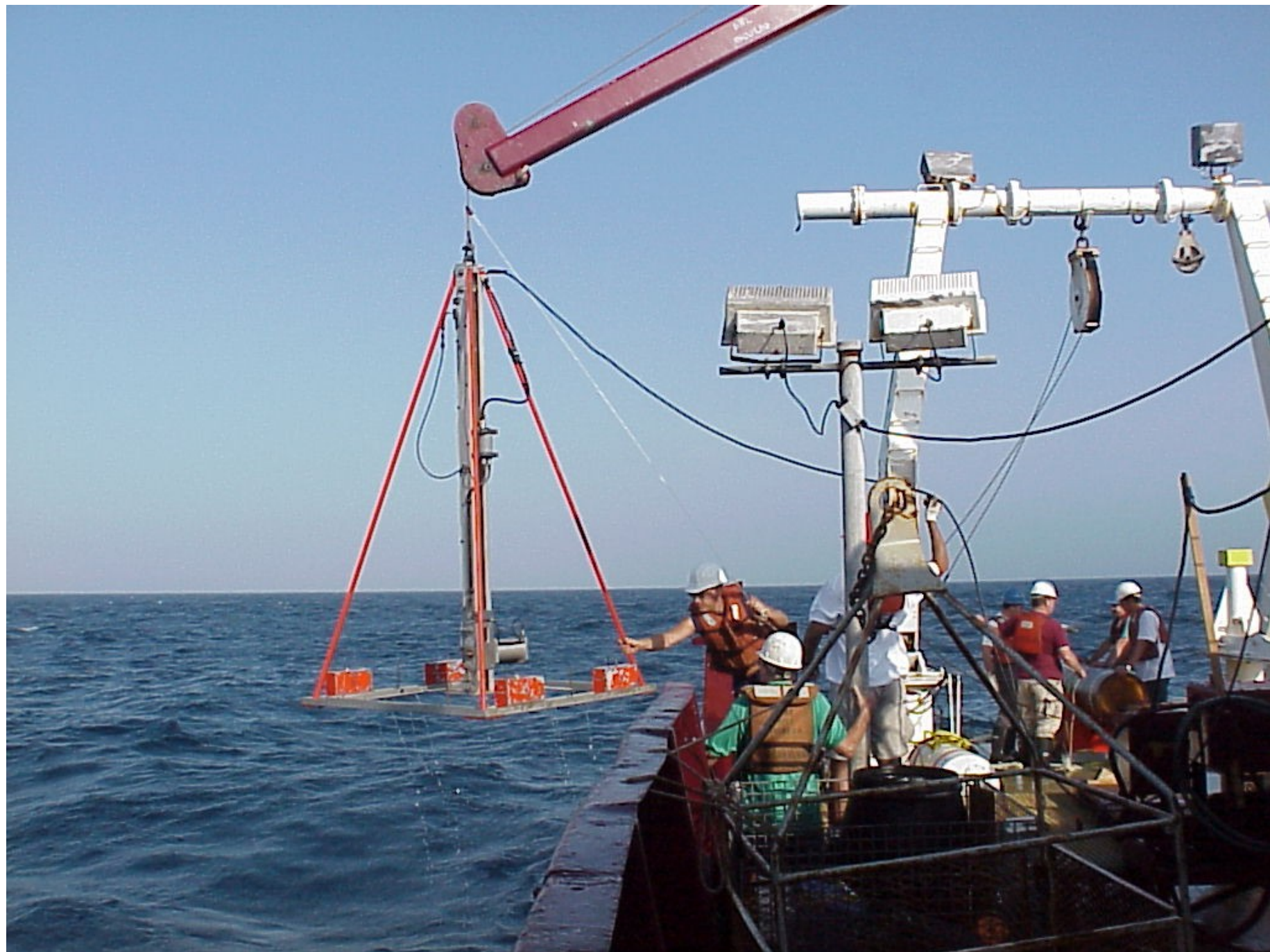


























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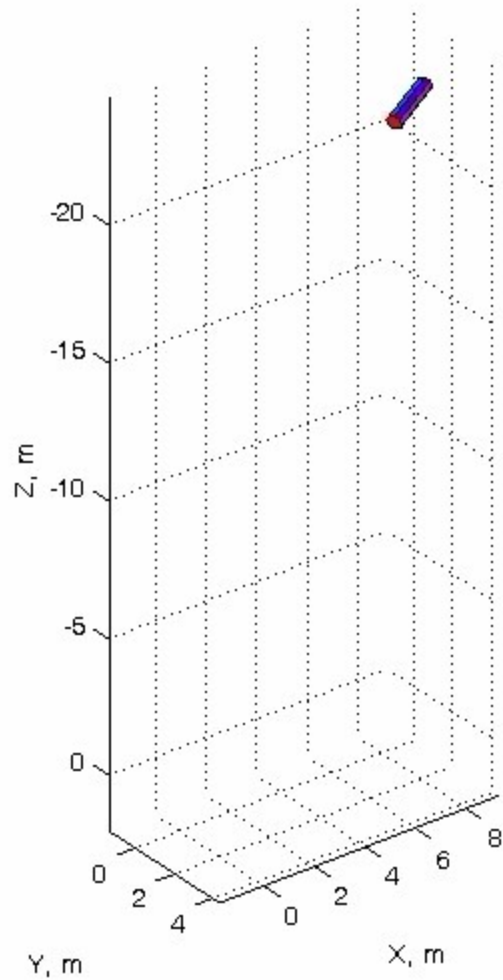


DATA from Corpus Christi

Experiment

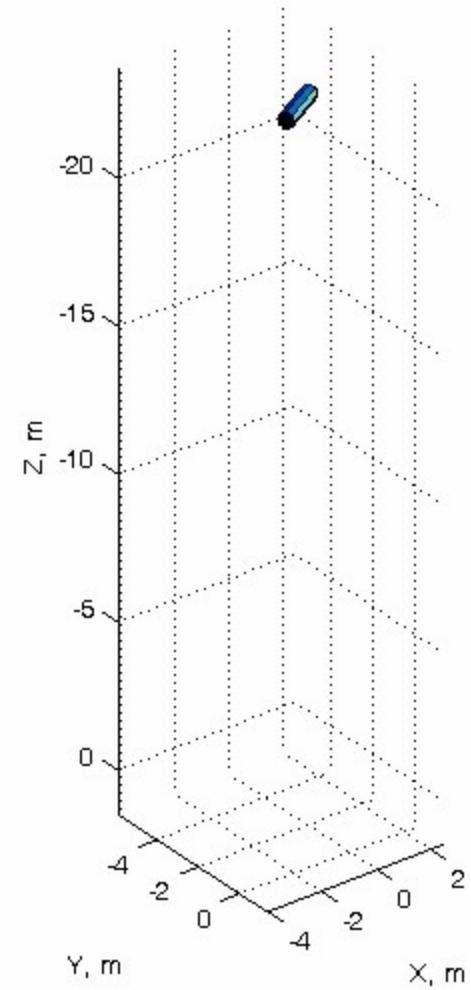
- Cylinder trajectories distributed
- Core data distributed save for grain size (NRL) & Atterberg Limits (TAMU)
- Penetrometer data available
- POC for data is Phil Valent, NRL-SSC, phone: (228) 688-4650, e-mail: Phil.Valent@nrlssc.navy.mil

Corpus Christi, Mine Drop #10 Trajectory



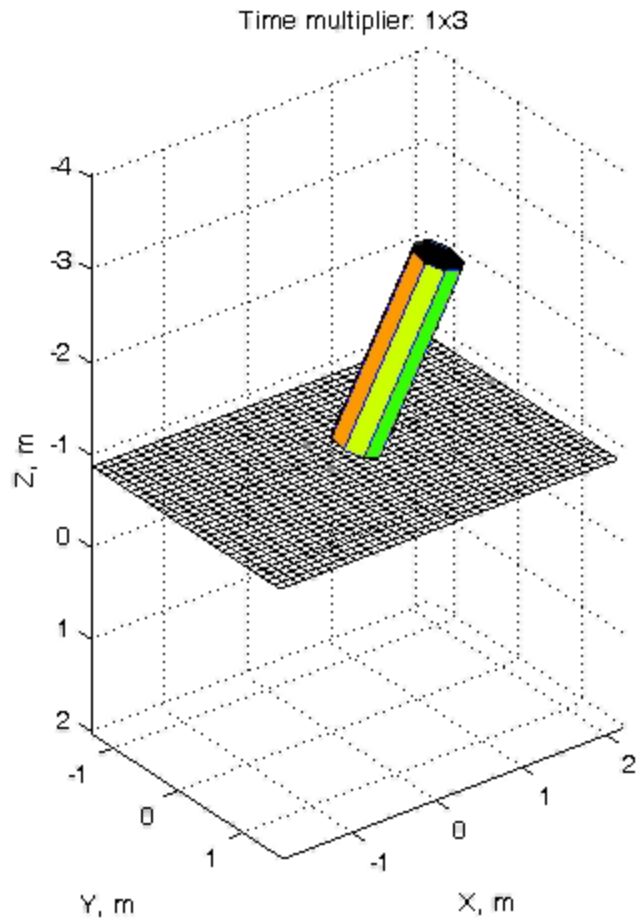
Click on chart to run movie

Corpus Christi, Mine Drop #11 Trajectory



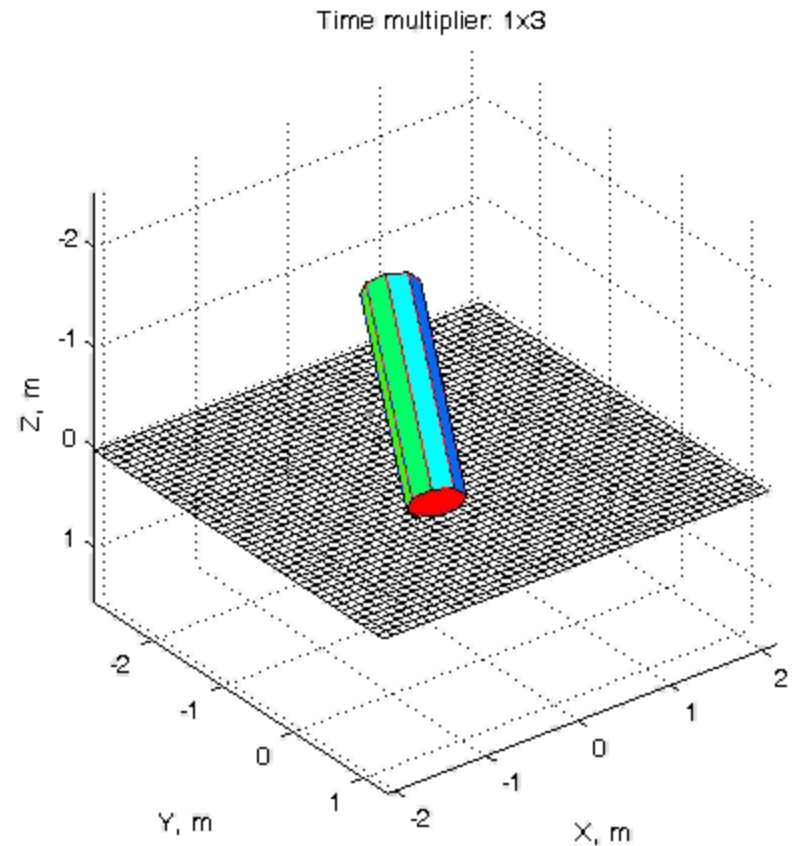
Click on chart to run movie

Corpus Christi, Mine Drop #10 Penetration into the Sediment



Click on chart to run movie

Corpus Christi, Mine Drop #11 Penetration into the Sediment



Click on chart to run movie



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NRL Impact Burial Project

Direction

- Continue Improvement of IMPACT28
Modeling of Cylinder Penetration
Mechanism for near-term working IBPM
- Carry out June & August experiments to fill data gaps
- Continue assessment of best means for supplying sediment data to MCM force
- Embark on development of new constitutive model for mine penetration in cohesive sediments



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Goals for this

Workshop

- Get hydrodynamicist and ES input for cylinder configuration for June & August experiments
- Participate in sidebar delineating Navy path to obtain shear strength data for IMPACTxx
- Collaborate with TAMU geotechs regarding sediment penetration model improvements